

166  
250.1

1/13

13-1

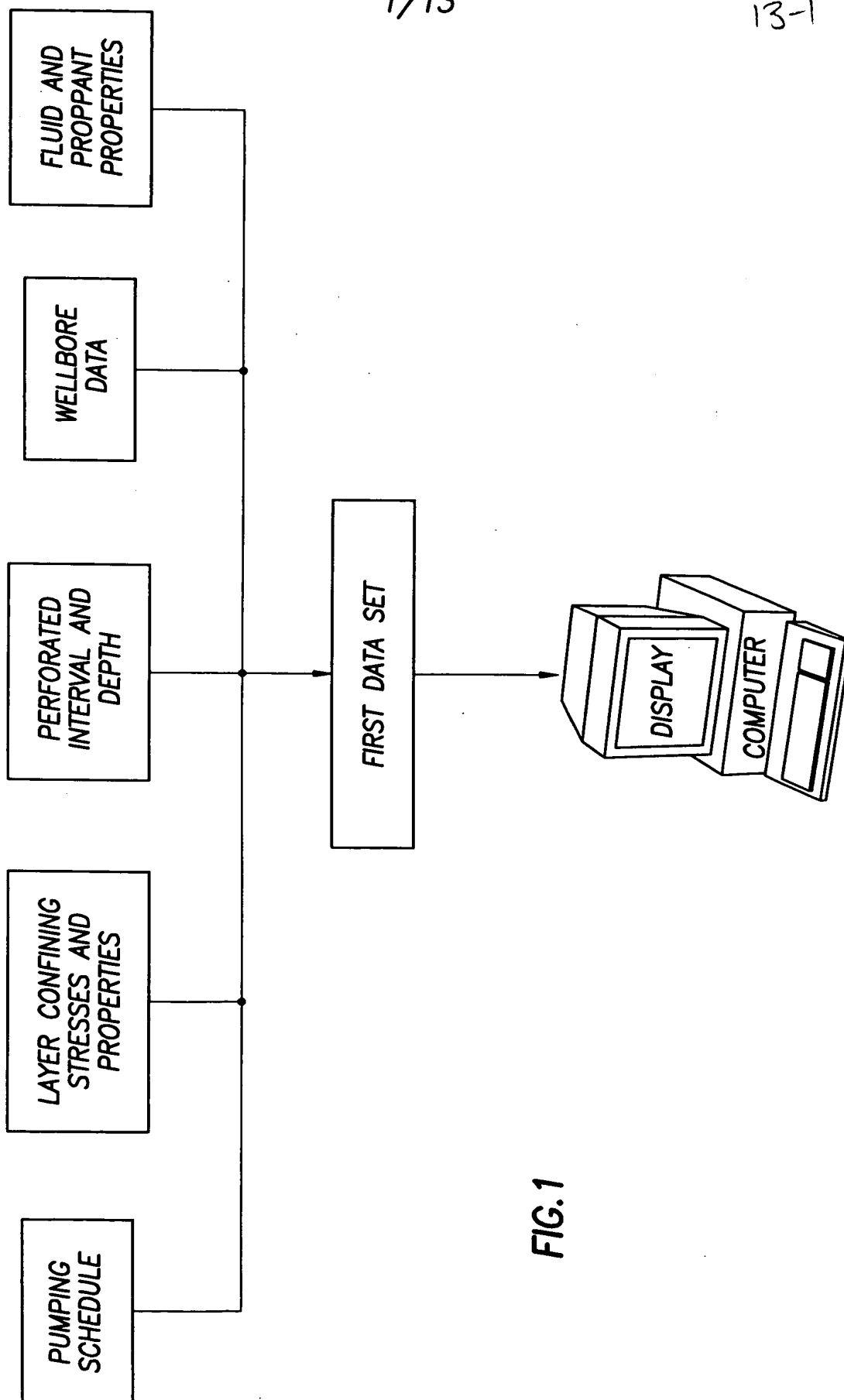


FIG.1

FIRST DATA SET  
REPRESENTING THE  
PHYSICAL PROPERTIES  
NECESSARY TO DETERMINE  
SIZE AND GROWTH OF  
THE FRACTURE

FIG.2

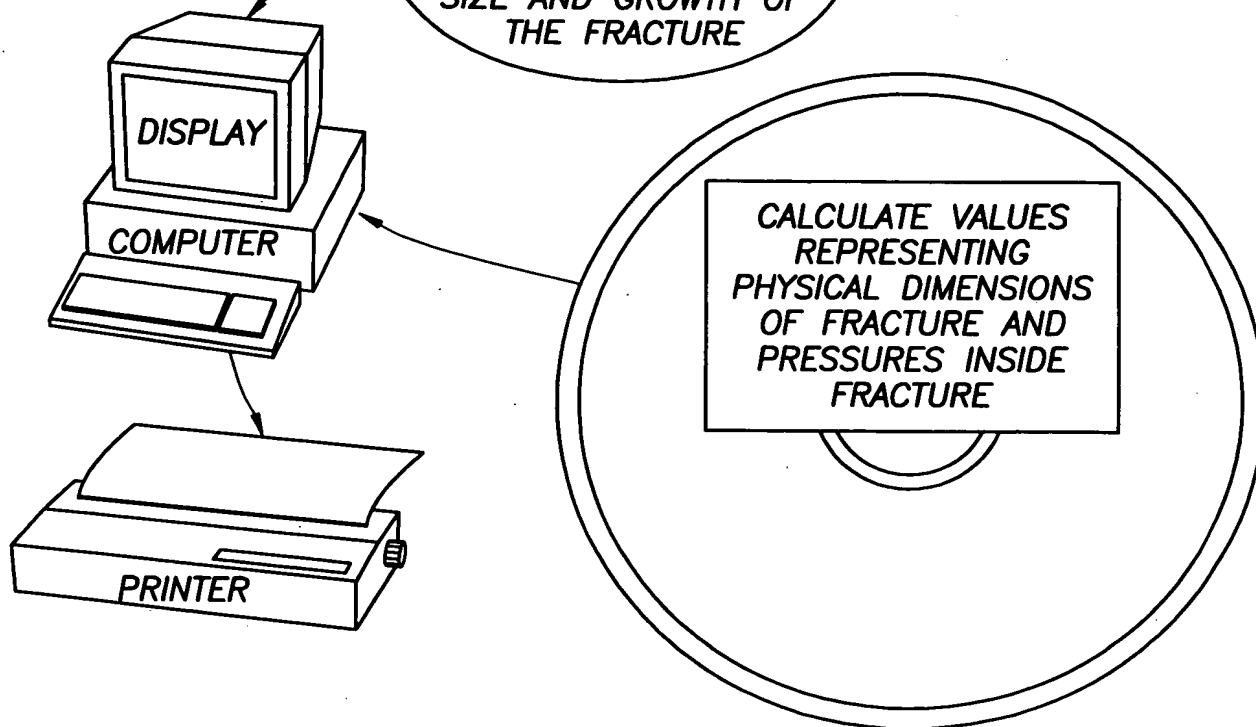
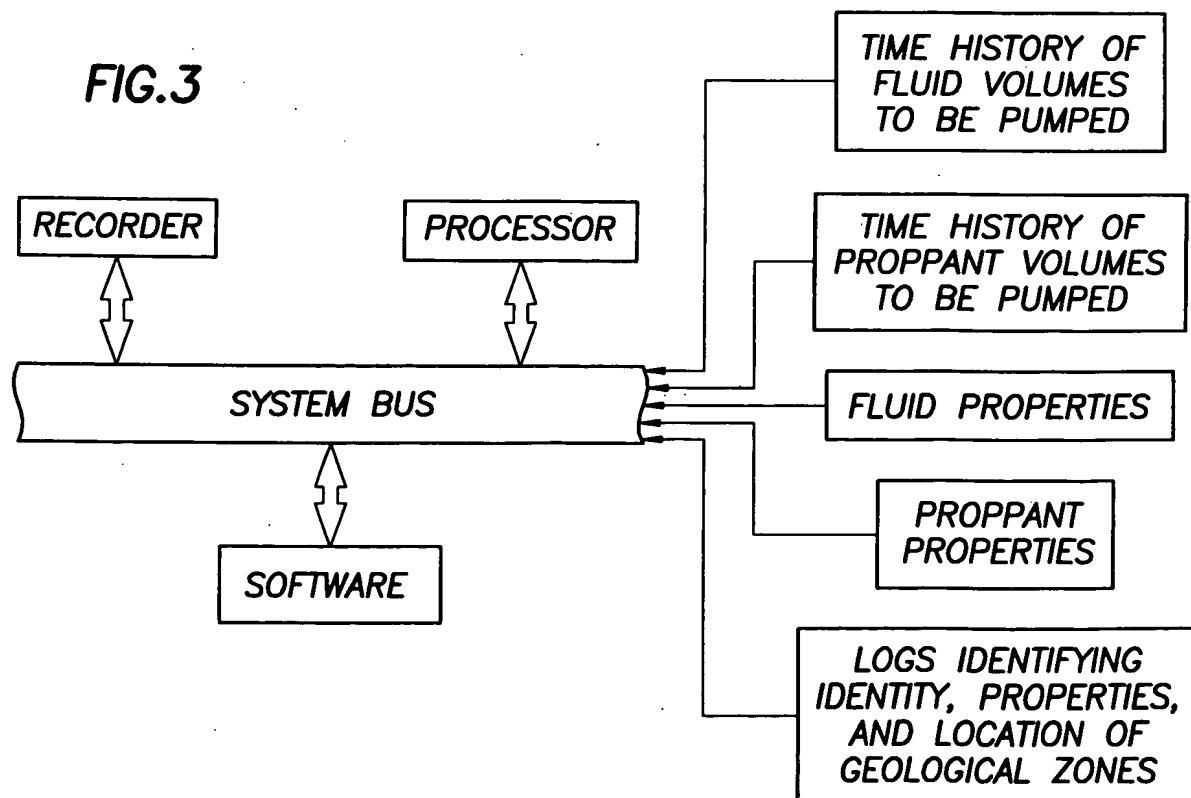
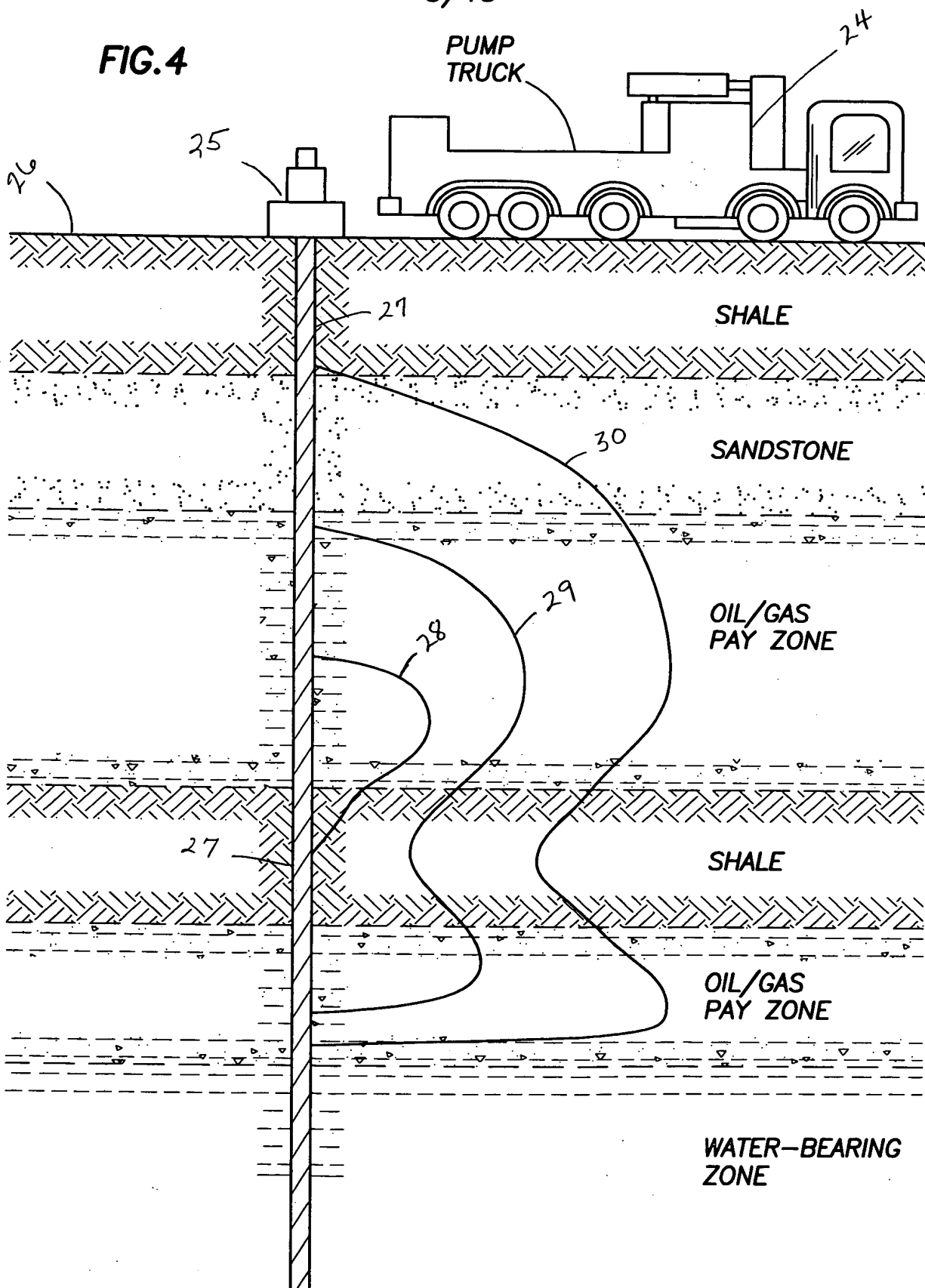


FIG.3



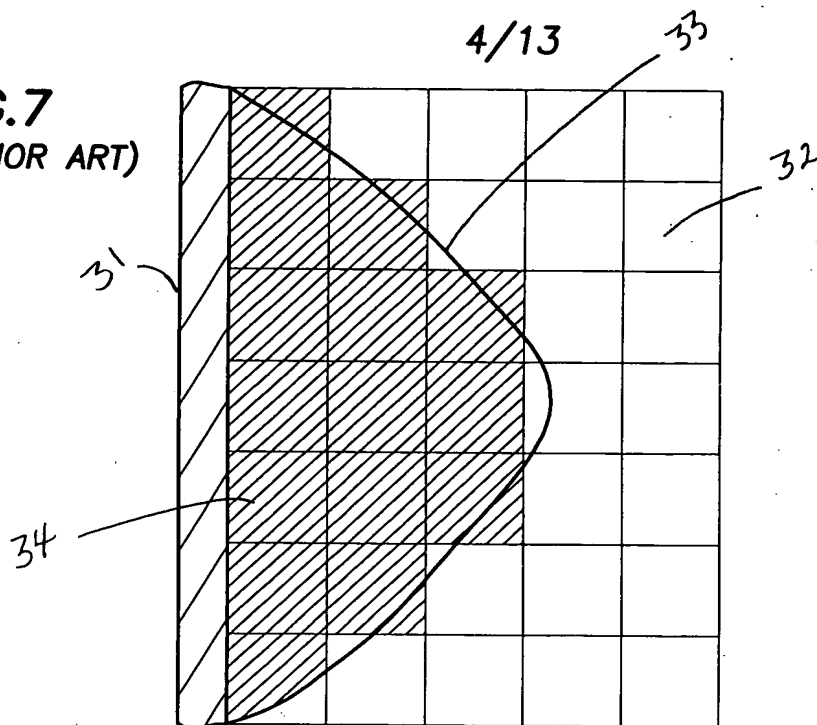
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FIG. 4



WATER-BEARING  
ZONE

**FIG. 7**  
(PRIOR ART)



**FIG. 5**

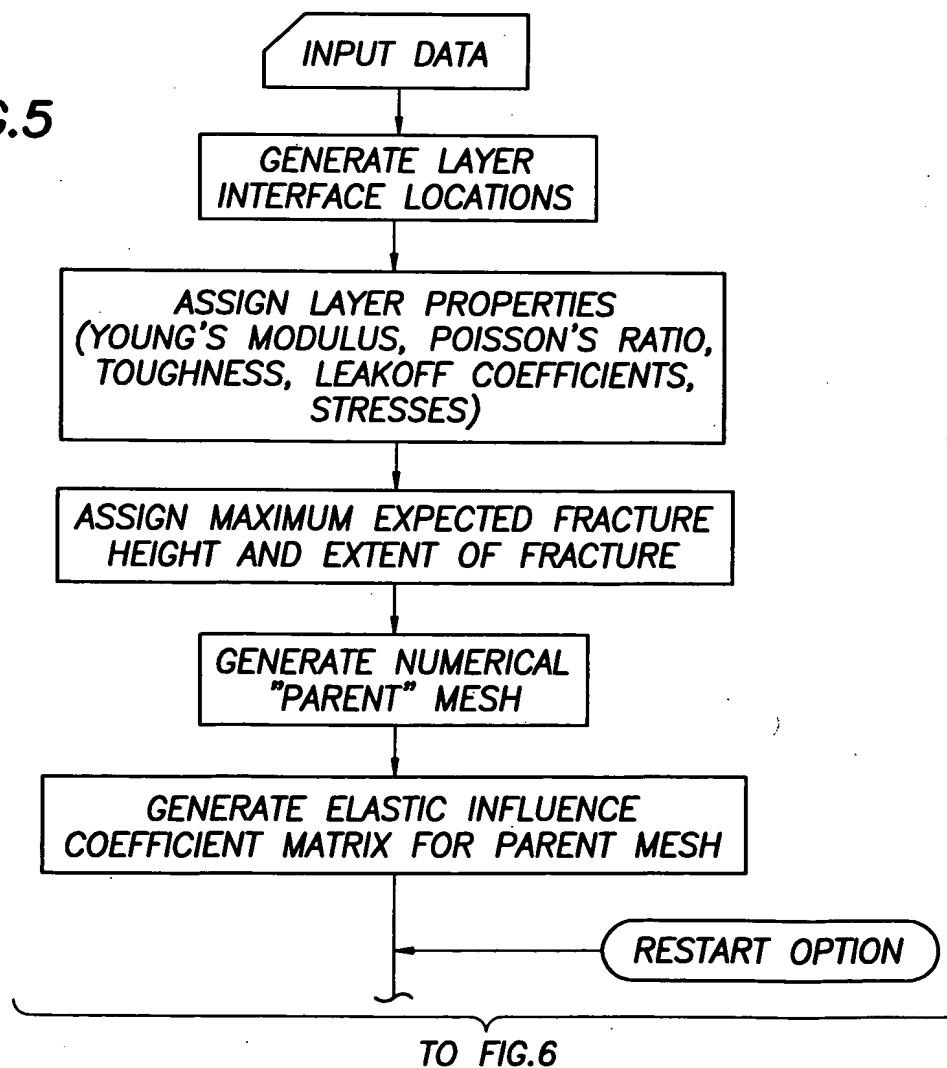
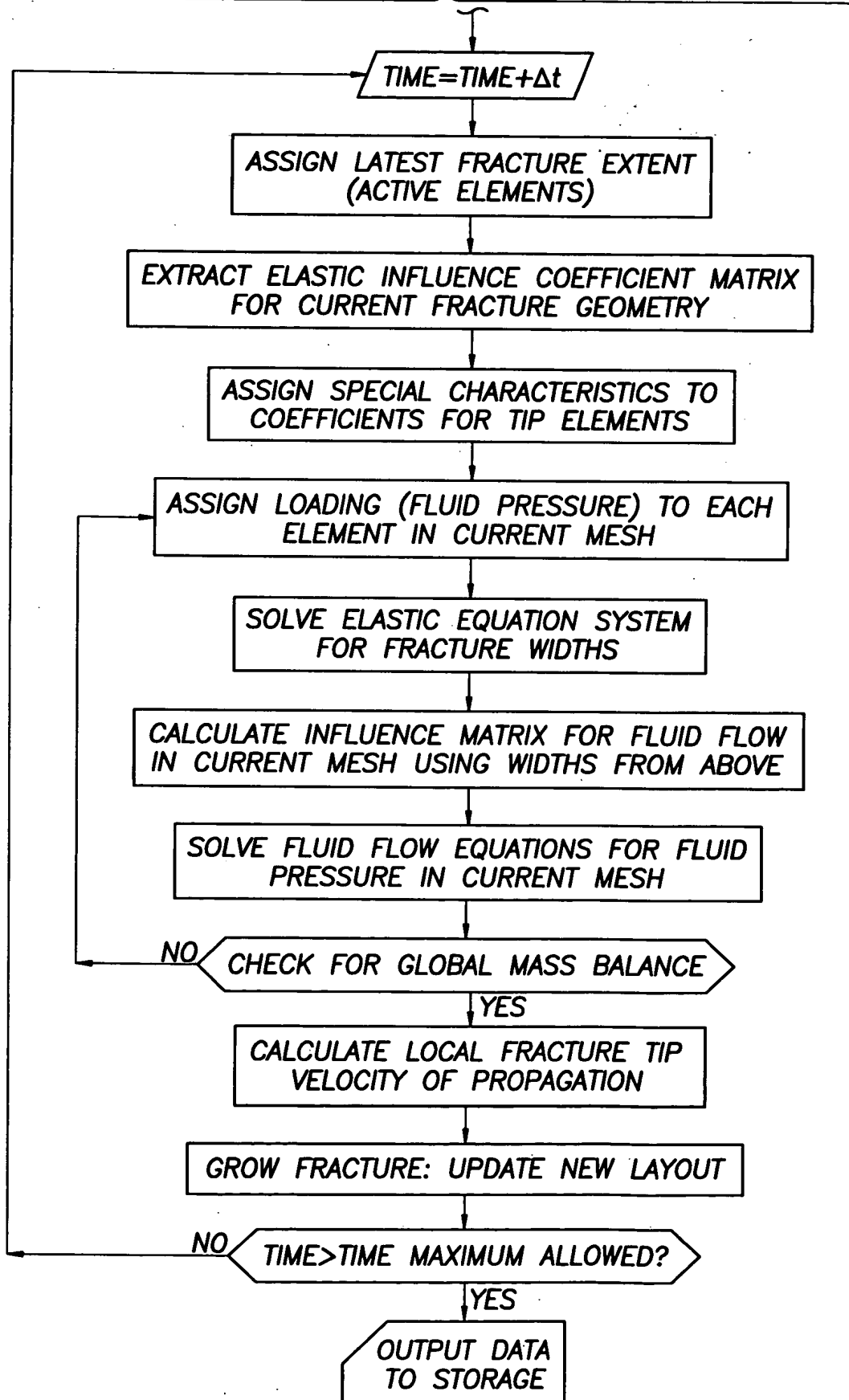
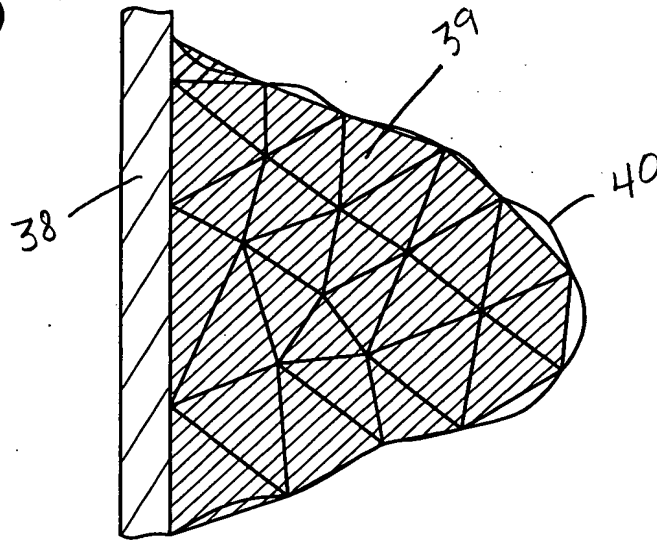


FIG.6

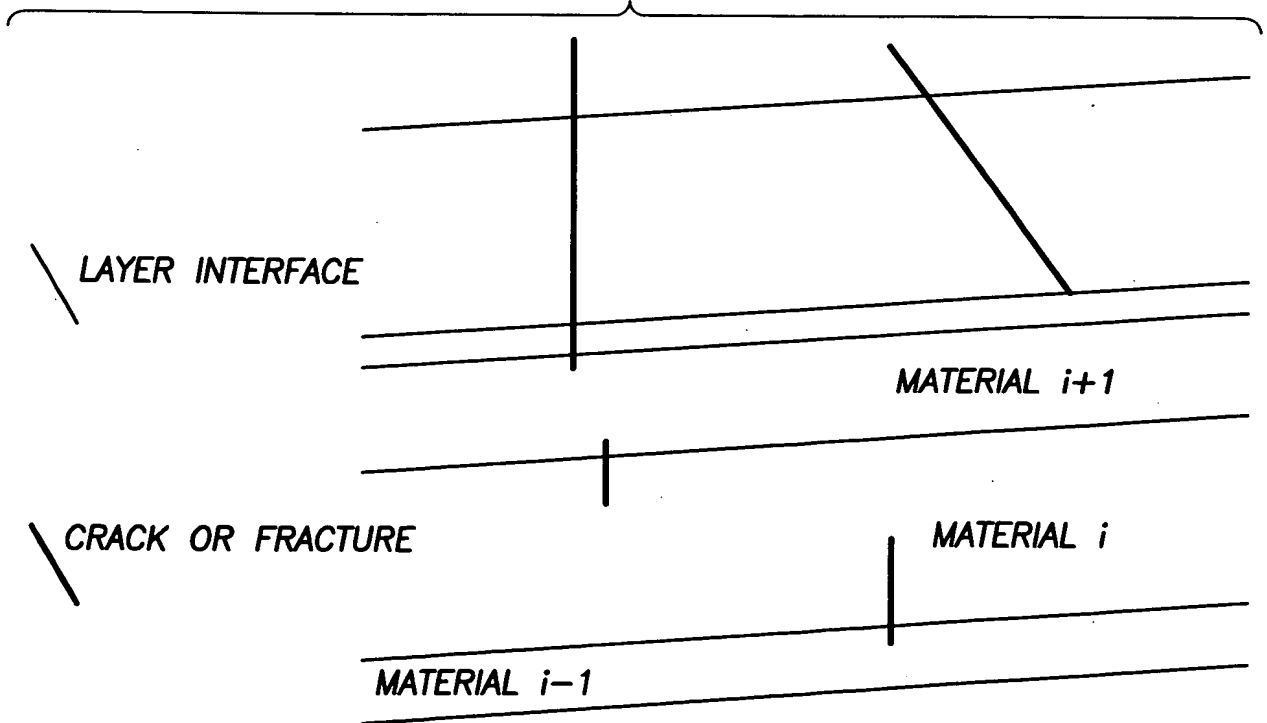
5/13  
FROM FIG.5



**FIG.8**  
(PRIOR ART)



**FIG.12**



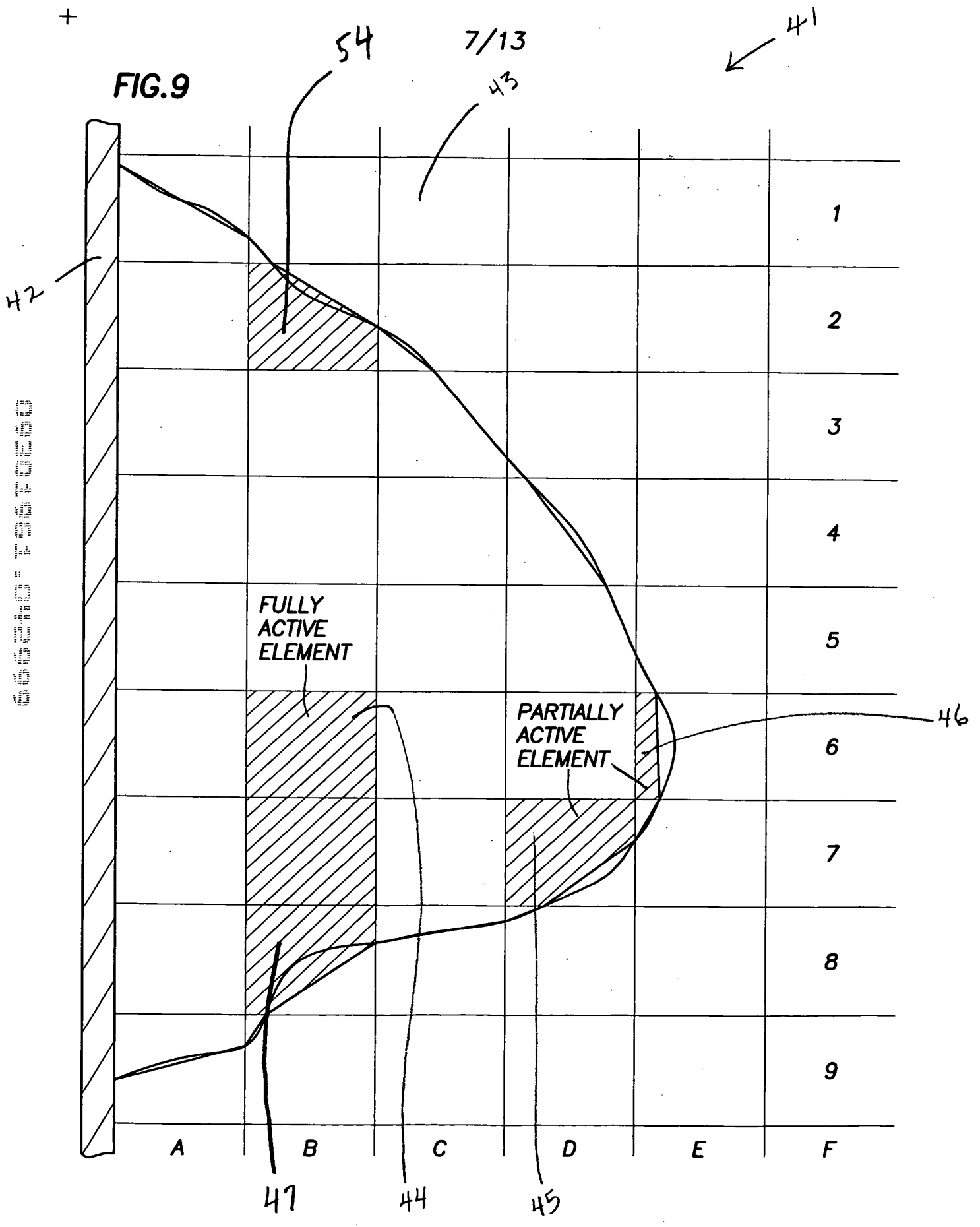


FIG. 10

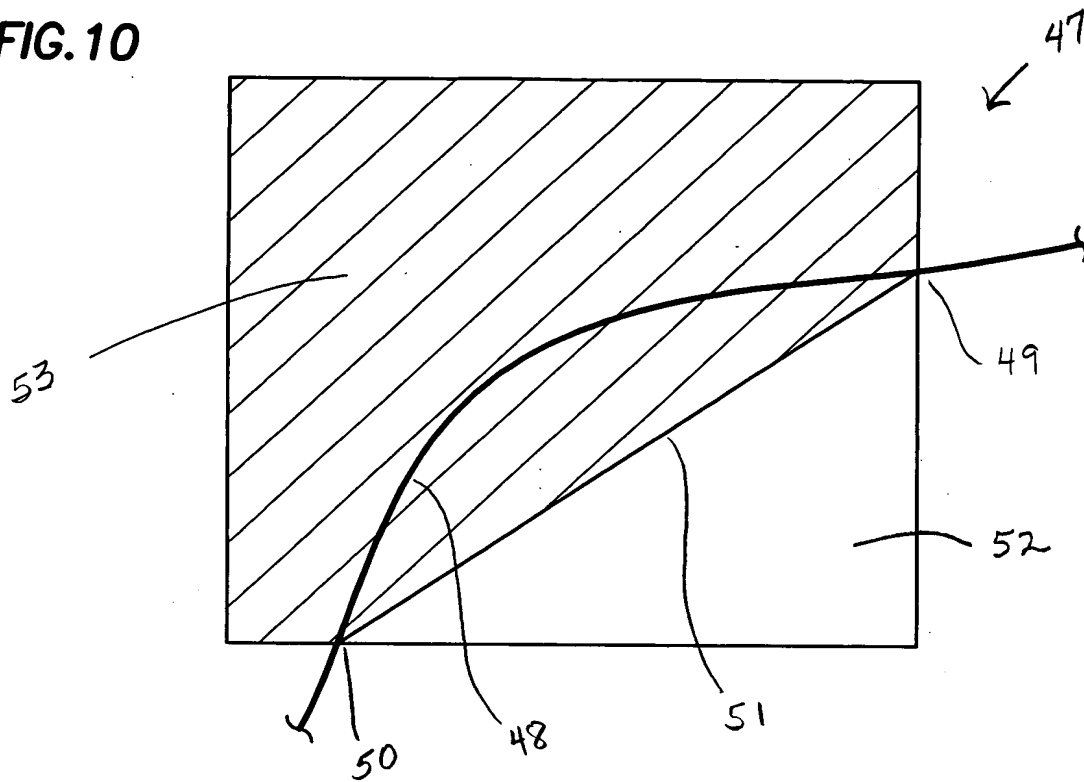
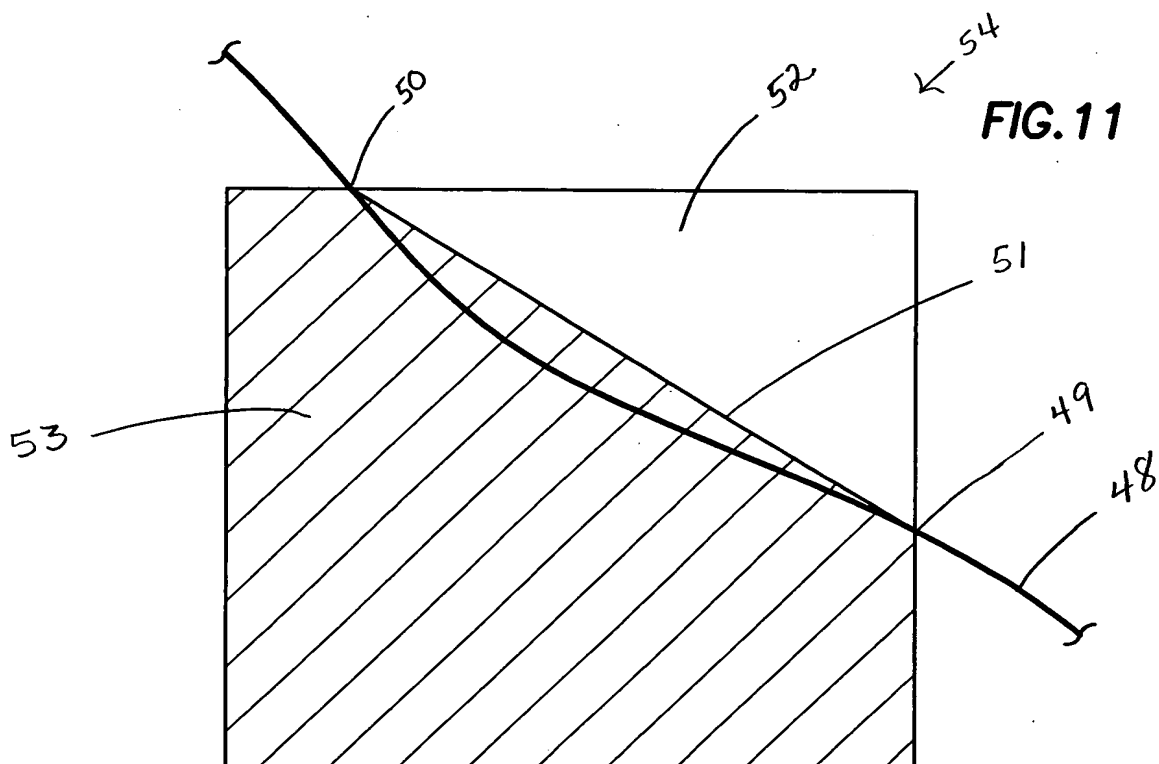


FIG. 11





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FIG. 13

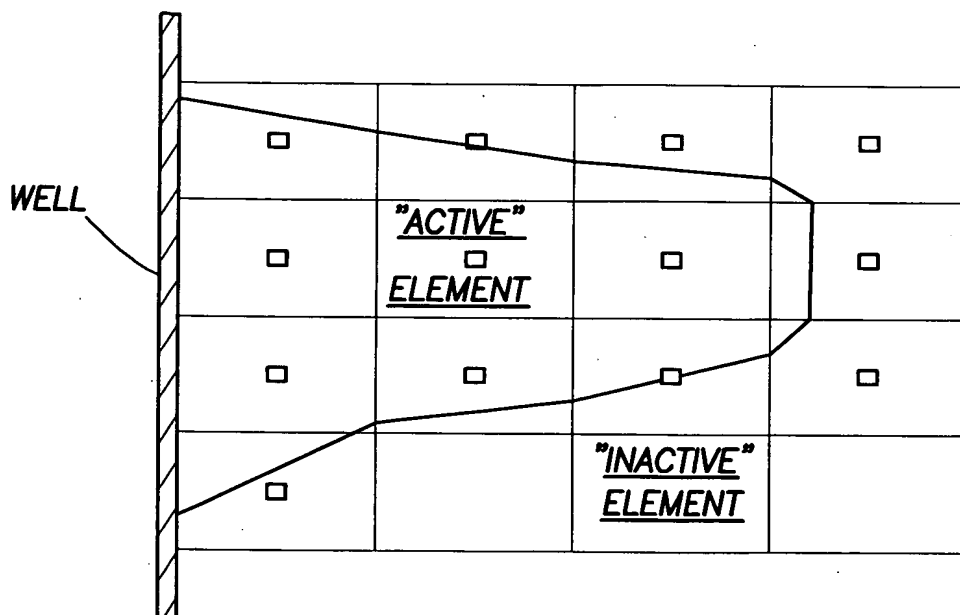
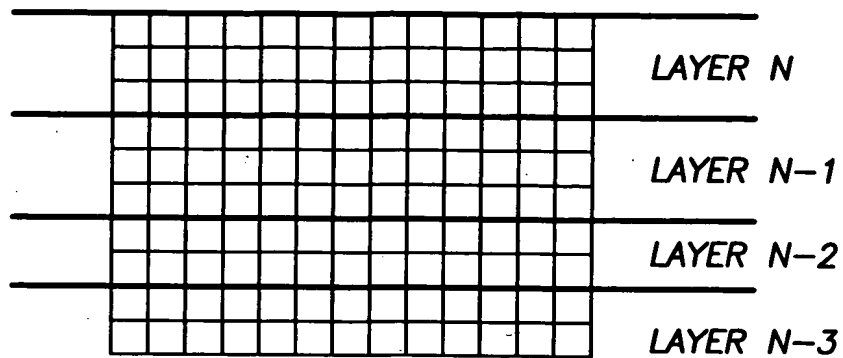
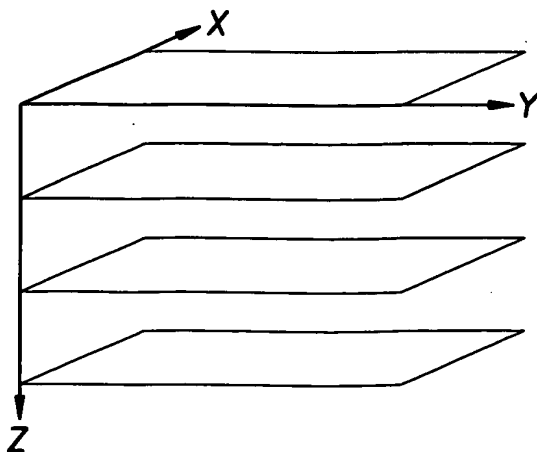


FIG. 14

FIG. 15



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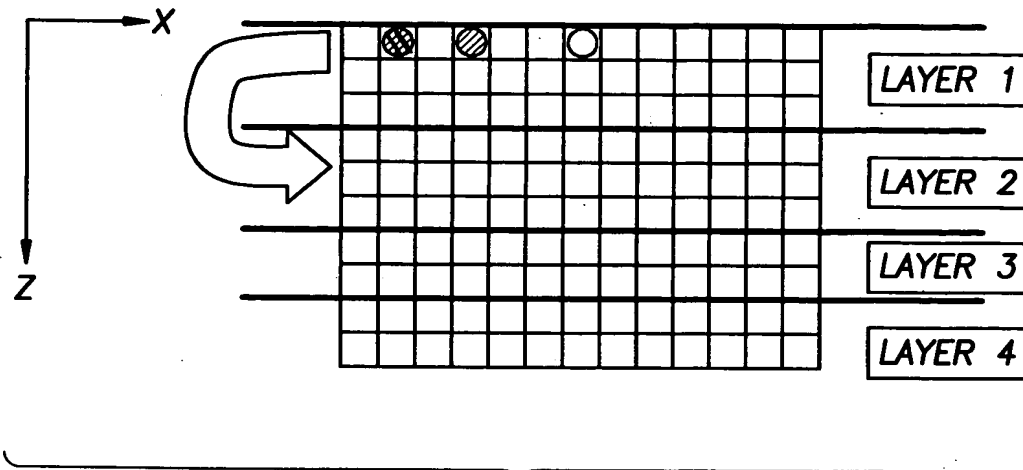
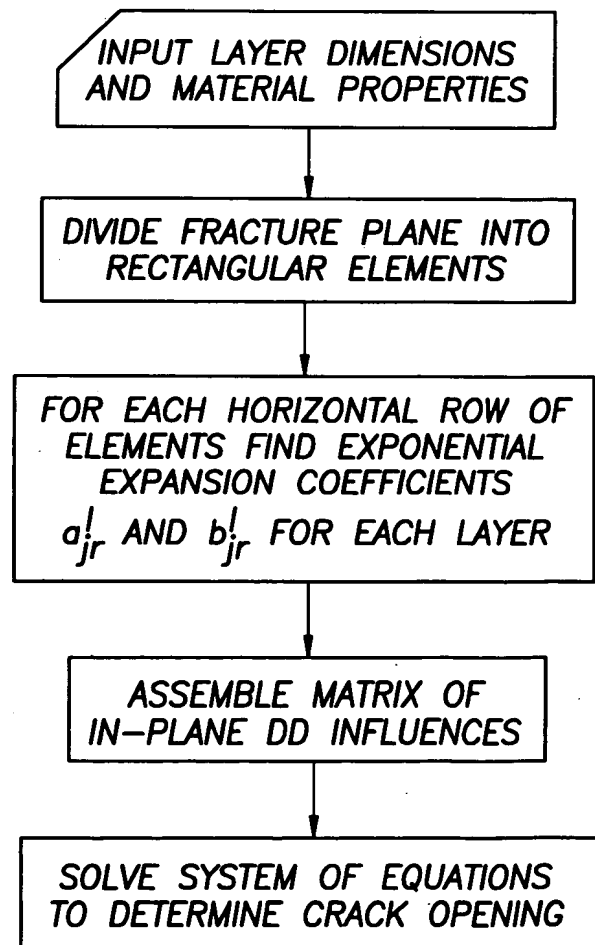


FIG. 16

FIG. 17



**FIG. 18**

<input type="checkbox"/> Dowell FracCADE - [Zone]			
<input type="checkbox"/> File Edit View FracCADE General Input Tools Window Help			
Untitled			
Admin	Well	ResFld	Zone Fluid Prop

### Single Zone Summary

Description		Zone Index <input type="text" value="1"/>	Zone Name <input type="text" value="CLEAN-SANDSTONE"/>	Rock Type <input type="text" value="CLEAN-SANDSTONE"/>
-------------	--	---	--	--

Dimensions	Physical Properties	Edit Parameters	Saturations
Top TVD <input type="text" value="4900.0 ft"/> Top MD <input type="text" value="4900.0 ft"/> Gross Height <input type="text" value="100.0 ft"/> Leakoff Height <input type="text" value="100.0 ft"/> Net Height <input type="text" value="100.0 ft"/> Spacing <input type="text" value="60 acres"/>	Porosity <input type="text" value="10.0%"/> Permeability <input type="text" value="1 md"/> Fracture Gradient <input type="text" value="0.626 psi/ft"/> Minimum In-situ Stress <input type="text" value="3099 psi"/> Reservoir Pressure <input type="text" value="2317 psi"/> Young's Modulus <input type="text" value="5.619E+06 psi"/> Poisson's Ratio <input type="text" value="0.20"/> Fracture Toughness <input type="text" value="1200 psi.in0.5"/> Specific Gravity <input type="text" value="2.50"/>	Fixed Variable <input type="text" value="TVD"/> Shift Direction <input type="text" value="DOWN"/>  <input type="button" value="New"/> <input type="button" value="Insert"/> <input type="button" value="Delete"/> <input type="button" value="Insitu Correlation..."/> <input type="button" value="Detailed Input..."/> <input type="button" value="Spreadsheet..."/>	Gas <input type="text" value="65.0%"/> Oil <input type="text" value="10.0%"/> Water <input type="text" value="25.0%"/>

Zone Perforations Number <input type="text" value="0"/>	Diameter <input type="text" value="0.320 in"/>
---	--

[illegible]+

FIG.20

